

WE CLAIM:

1. A method for hydrolyzing α -galactose bonds comprising:
contacting a compound having an α -galactose bond with an effective amount of
an enzyme having at least a 70% amino acid identity to amino acid sequence set forth in SEQ ID
NO: 4.
2. The method according to claim 1 wherein the enzyme has at least 90% amino acid
identity to the amino acid sequence set forth in SEQ ID NO: 4.
3. The method according to claim 1 wherein the enzyme comprises a sequence of
amino acids identical to amino acids 1 to 364 of SEQ ID NO:4.
4. The method according to claim 1 wherein the enzyme has the amino acid
sequence as set forth in SEQ ID NO: 4.
5. The method according to claim 1 wherein the enzyme is recombinantly produced.
6. The method according to claim 1 wherein the compound having the α -galactose
bond is raffinose.
7. The method according to claim 6 wherein the α -galactose bond is in raw beet
sugar.
8. The method according to claim 1 wherein the compound is raffinose, stachyose,
verbascose, or a combination thereof.
9. The method according to claim 8 wherein the compound is contained in a member
of the lentil or bean family, or a combination thereof.

10. The method according to claim 1 wherein the contacting is at a temperature of about 85° C.

11. The method according to claim 1 wherein the contacting is at a pH of about 9.5.

12. The method according to claim 1 wherein the contacting is at a temperature of about 85° C and a pH of about 9.5.

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